SEP 2 0 2004 SEP

Patent Application Attorney Docket No.PC25193A

I hereby certify that this correspondence is being deposited with the United States Postal Service as first-class mail in an envelope addressed to: Hon. Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450 on this 18th day of September, 2004. Ву Janige Denison (Typed or printed name of person) IN THE UNITED STATES PATENT AND TRADEMARK OFFICE IN RE APPLICATION OF: Jayvardhan Pandit Examiner: To be assigned APPLICATION NO.: 10/815,390 Group Art Unit: To be assigned 03/31/2004 FILING DATE: TITLE: Crystal Structures Of 3', 5'-Cyclic Nucleotide Phosphodiesterase (Pde1b) And Uses Thereof Hon. Commissioner for Patents P. O. Box 1450 Alexandria, VA 22313-1450 Sir:

INFORMATION DISCLOSURE STATEMENT PURSUANT TO 37 C.F.R. § 1.97 ET SEQ.

Applicant(s) herein make(s) available to the U.S. Patent and Trademark Office a copy of PTO-FB-A820 which lists the references cited by the applicant(s), copies of which are enclosed.

The Examiner is requested to consider carefully the complete text of these references in connection with the examination of the above-identified application in accord with 37 C.F.R. § 1.104(a). It is believed the Examiner will concur with applicant's belief that the subject matter presently claimed is neither anticipated nor rendered obvious by the foregoing references.

It is requested that the references listed on the attached form PTO-FB-A820 be included in the "References Cited" portion of any patent issuing from this application (M.P.E.P. § 1302.12).

A prompt and favorable response is earnestly solicited.

Respectfully submitted,

Irene M. Reininger
Attorney for Applicant(s)

Reg. No. 48,439

Pfizer Inc.

Patent Department, MS 8260-1611 Eastern Point Road

Groton, Connecticut 06340

(860) 715-5756

SEP 2 0 2004

INFORMATION DISCLOSURE CITATION ATTY. DOCKET NO. PC25193A SERIAL NO. 10/815,390 **APPLICANT Pandit** (Use several sheets if necessary) **GROUP** FILING DATE 03/31/2004 **U.S. PATENT DOCUMENTS** FILING DATE DOCUMENT NUMBER NAME CLASS SUBCLASS EXAMINER INITIAL 9 5 07/28/87 Mullis, et al. 435/6 435/91 US 6 8 3 4 435/183 Я 5 03/12/02 Benson, et al. 702/19 US 6 3 5 6 **FOREIGN PATENT DOCUMENTS** COUNTRY CLASS SUBCLASS DATE DOCUMENT NUMBER YES NO 2 0 2 3 1 03/15/89 Canada C12N 15/87 CA 1 1 Europe C12N 15/53 8 5 0 9 2 03/21/01 EP 1 0 08/26/99 PCT C12N 15/55 wo 2 5 9 6 9 9 OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.) Appelt, K., Crystal structures of HIV-1 protease-inhibitor complexes, Perspectives in Drug Discovery and Design, Vol. 1: 23-48, Beavo, J., Cyclic nucleotide phosphodiesterases: functional implications of multiple isoforms, Physiol. Rev., Vol. 75: 725-748, 1995 Blundell, T., et al., High-throughput crystallography for lead discovery in drug design, Nature Reviews, Vol. 11: 45-60, 2002 Brooks, B., et al., CHARMM: A program for macromolecular energy, minimization, and dynamics calculations, Journal of Comp. Chem., Vol. 4(2): 187-217, 1983 Bugg, C., et al., Drugs by design, Scientific American, 93-98, 1993 Charbonneau, H., et al., Identification of a conserved domain among cyclic nucleotide phosphodiesterases from diverse species, Proc. Natl. Acad., Sci. (USA), Vol. 83: 9308-9312, 1986 Cwirla, S., et al., Peptides on phage: a vast library of peptides for identifying ligands, Proc. Natl. Acad. Sci., Vol. 87: 6378-82, 1990 Devlin, J., et al., Random peptide libraries: a source of specific protein binding molecules, Science, Vol. 249: 404-06, 1990 Erickson, J., Design and structure of symmetry-based inhibitors of HIV-1 protease, Perspectives in Drug Discovery and Design, Vol. 1: 109-28, 1993 Fidock, M., et al., Isolation and differential tissue distribution of two human cDNAs encoding PDE1 splice variants, Cellular Signalling, Vol. 14: 53-60, 2002 Francis, S., et al., Zinc interactions and conserved motifs of the cGMP-binging cGMP-specific phosphodiesterase suggest that it is a zinc hydrolase, J. Biol. Chem., Vol. 269: 22477-22480, 1994 Johnson, J., et al., A continuous fluorescence assay for cyclic nucleotide phosphodiesterase hydrolysis of cyclic GMP, Analytical Biochemistry, Vol. 162: 291-295, 1987 DATE CONSIDERED **EXAMINER** EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with

next communication to applicant.

INFORM	ATION DISCLOSURE CITATION	ATTY, DOCKET NO. PC25193A			SERIAL NO. 10/815,390				
(Use	e several sheets if necessary)	APPLICANT Pandit							
		FILING DATE 03/3	FILING DATE 03/31/2004			GROUP			
		U.S. PATENT DOC	UMENTS						
EXAMINER	DOCUMENT NUMB	ER	DATE	NAME	CLAS	S SUBCLASS	FILING DATE IF APPROPRIATE		
INITIAL_	F	OREIGN PATENT DO	CUMEN	тѕ					
. DOCUMENT NUMBER			DATE	COUNTRY	CLA	SS SUBCLASS	TRANSLATION YES NO		
	OTHER DOCUMENT	S (Including Author, 1	∟ Γitle, Date,	, Pertinent Pa	ges, Etc.)				
	Juarez-Martinez, G., et al., <i>High-throtechnology</i> , <u>Anal. Chem.</u> , Vol. 74: 3: Kabsch, W., et al., <i>Dictionary of protechinology</i> , 10: 22: 2577-2637, 1:	505-3510, 2002 tein secondary structure: p							
	Kissinger, C., et al., Rapid automate		oy evolutiona	ary search, <u>Acta</u>	Crystallograp	hica, Vol. D55:	484-491,		
	Kruuse, C., et al., <i>The role of cGMF</i> 420: 55-65, 2001	P hydrolysing phosphodiest	erases 1 and	d 5 in cerebral ar	tery dilation,	Euro. Journal o	f Pharm., Vol.		
	Lam, P., et al., Rational design of po	otent, bioavailable, nonpep	tide cyclic u	reas as HIV prote	ease inhibitor	s, <u>Science</u> , Vo	I. 263: 380-		
	Manganiello, V., et al., Perspectives families, Archives of Biochem. and	s in biochemistry and bioph Biophys., Vol. 322(1): 1-13	ysics: divers 3, 1995	sity in cyclic nucle	eotide phospi	hodiesterase iso	oenzyme		
	Meng, E., et al., Automated docking	g with grid-based energy ev	/aluation, <u>Jo</u>	urnal of Comp. C	Chem., Vol. 1	3(4): 505-524, 1	1992		
	Morris, G., et al., Automated dockin Comp. Chem., Vol. 19(14): 1639-16	ng using a Lamarckian gen 662, 1998	etic algorithm	n and an empiric	al binding fre	e energy functio	on, Journal of		
	Murshudov, G., et al., Refinement of 1997	of Macromolecular structur	es by the ma	eximum-likelihood	d method, <u>Ac</u>	ta Cryst., Vol. D	953: 240-255,		
	Navaza, J., AmoRe: an automated	package for molecular rep	lacement, <u>A</u>	cta Crystallograp	hics, Vol. A5): 157-63, 1994			
	Otwinowski, Z., et al., <i>Processing o</i> 1997	of X-Ray diffraction data co	llected in os	cillation mode, M	ethods in En	zymology, Vol. :	276: 307-326,		
	Polli, J., et al., Expression of a caln extensive dopaminergic innervation	nodulin-dependent phosph n, <u>Journal of Neuroscience</u>	odiesterase , Vol. 14(3):	isoforms (PDE 1 1251-1261, 1994	B1) correlate	s with brain reg	ions having		
EXAMINER	₹	DATE	CONSIDER	ED					
			_			-			

			T	D00540)2 A	SEDIAL N	10/81	5 390			
INFORMATION DISCLOSURE CITATION			ATTY. DOCKET NO. PC25193A SERIAL NO. 10/815,390								
(Use several sheets if necessary)			APPLICANT Pandit								
			FILING DATE 03/3			GROUP					
			U.S. PATENT DOCI			CLAS	S SUBCLASS	FILING DATE			
EXAMINER INITIAL	DOCUMENT NUMBER			DATÉ			S SUBCLASS	IF APPROPRIATE			
		F	OREIGN PATENT DO	COMEN.	rs ———			Т			
DOCUMENT NUMBER				DATE	COUNTRY CLASS		S SUBCLASS	TRANSLATION YES NO			
		OTHER DOCUMENT	S (Including Author, 1	itle, Date	, Pertinent Pa	ages, Etc.)					
		Polli, J., et al., <i>Molecular cloning of</i> 11079-83, 1992	DNA encoding a calmoduli	n-dependani	t phosphodiestei	rase enriched	in striatum, <u>PN</u>	AS, Vol. 89:			
		Reed, T., et al., Genomic structure and chromosome location of the murine PDE1B phosphodiesterase gene, Mammalian Genome Vol. 9: 571-576, 1998									
		Scott, J., et al., Searching for peptide ligands with an epitope library, Science, Vol. 249: 386-390, 1990									
		Smith, D., et al., Single-step purification of polypeptides expressed in Escherichia coli as fusions with glutathione S-transferase, Gene, Vol. 67: 31-40, 1988									
		West, M., et al., Targeting HIV-1 protease: a test of drug-design methodologies, TIPS, Vol. 16: 67-75, 1995 Wilson, J. et al., Hepatocyte-directed gene transfer in vivo leads to transient improvement of hypercholesterolemia in low density lipoprotein receptor-deficient rabbits, Journal of Biol. Chem., vol. 267(2): 963-967, 1992 Wildawer, A., et al., Structure-based inhibitors of HIV-1 protease, Annu. Rev. Biochem., Vol. 62: 543-585, 1993									
		Wu, G., et al., Receptor-mediated	gene delivery and expressi	on in Vivo, <u>J</u>	ournal of Biol. C	<u>hem.,</u> Vol. 26	3(29): 14621-14	1624, 1988			
		Xu, R., et al., Atomic structure of P 2000	DE4: insights into phospho	diesterase r	mechanism and :	specificity, <u>Sc</u>	ence, Vol. 288	1822-1825,			
		Yu, J., et al., <i>Identification and cha</i> 9(7): 519-529, 1997	racterization of a human ca	almodulin-sti	mulated phosph	odiesterase P	DE1B1, <u>Cell. S</u>	ignal., Vol.			
		Zhang, K., et al., A glutamine switch 2004	ch mechanism for nucleotid	e selectivity	by phosphodies	terases, <u>Mole</u>	cular Cell, Vol.	15: 279-286			
					<u> </u>						
	1		DATE	CONSIDER	RED						
				·		· · ·					
EXAMINER next commu	t: Initial if re	eference considered, whether or not citation is in o				nce and not consid	dered. Include copy	of this form wi			